

Serial No.: 09/904,692
Amendment Dated: November 18, 2004
Reply to Office Action of August 18, 2004
Express Mail Label No. EV 514700240 US

REMARKS

The above-captioned patent application has been carefully reviewed in light of the Final Office Action to which this Amendment is responsive. New Claims 60-61 have been added replacing Claims 1 and 54, now canceled. In addition, Claims 2-22 and 55-59 have been amended in an effort to further clarify and particularly point out that which is regarded as the present invention. To that end, it is believed that no new matter has been added.

The Examiner has rejected all of the pending Claims 1-22 and 54-59 on the basis of certain prior art. Applicants' herein respectfully request reconsideration based on the new and amended claims and the following discussion.

Applicants' gratefully acknowledge the telephonic interview granted by Examiner Lyle Alexander to Applicants' representative, Peter J. Bilinski, on November 15, 2004. The subject matter of that interview is incorporated herein.

In particular, the Examiner has maintained his rejection of the pending claims based on the citation of U.S. Patent Nos. 5,523,056 to Miller, 5,419,871 to Muszak et al. or 5,827,478 to Carey et al, as being anticipatory under 35 USC 102 (b). Applicants' herein traverse the above rejection.

First and in order to anticipate under the Statute, each and every claimed limitation must be found in a single cited prior art reference. Those limitations that are not found in the single cited reference must be notoriously well known to those in the field of the invention.

As previously noted, Miller describes a twin rotor incubator assembly for a clinical analyzer. The assembly described includes a pair of independently driven, vertically stacked rotors 52, 54 that are interconnected by means of an elevator assembly. Each of the rotors are driven about separate axes of rotation which are offset from one another, see Fig. 4. The upper incubator according to the embodiment described is used for potentiometric slide elements, while the lower incubator assembly is used specifically for colorimetric slide elements. Critical to

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the workings of the instant reference is that slide elements can only be shuttled between the vertically stacked rotors by means of the elevator assembly.

Muszak et al. teaches the elevator assembly that is used in the incubator according to Miller. The elevator assembly does include a shuttle mechanism that permits a slide element to be loaded radially into the incubator housing and in particular into one of the rotor assemblies. The elevator, however, is driven so as to transport the slide elements between the vertically spaced rotors in a vertical direction and not a horizontal direction.

Carey et al. describes an incubator assembly that is used to handle multiple assays in an immunoassay clinical analyzer. The incubator includes a housing having a single cuvette ring that includes a plurality of circumferential slots, each sized for receiving a cuvette. The cuvette ring is disposed above a magnet ring used to drive the cuvette ring. The cuvette ring is driven radially so as to pass a plurality of stations, including read stations. In addition, a number of stations are disposed outside of the incubator housing as used to dispense reagents, wash fluids, and perform other assay reaction steps. This incubator also includes an elevator assembly, as described at col 18, lines 56-67, wherein a cuvette can be lifted from a slot to permit a new cuvette to be added to take a now empty slot in the cuvette ring.

According to the present invention, a first and a second array of load stations are disposed relative to one another such that at least one of the arrays can be moved in a first horizontal direction. In the case of an incubator having a rotor assembly, this can involve rotary movement of at least one or both of the arrays, either independently or coupled. The arrays are arranged relative to one another in a second horizontal direction which is orthogonal to the first horizontal direction, wherein each of the load stations includes at least one receiving area sized to receive a sample element. At least one first drive mechanism is used to drive the at least one array in the first horizontal direction.

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At least one second drive mechanism is also included for driving at least one slide element in the second horizontal direction so as to either load elements into one of the arrays of load stations to move load elements within an array having a load station having more than one receiving area or to move elements between arrays. This provides an advantage previously not found in known incubators that drastically increases throughput. For example, and as shown in Figs. 10-12 of the present disclosure, a particular incubator design includes an outer rotor with load stations having one receiving area and an inner rotor with load stations with two radially adjacent receiving areas. Each of the rotors are independently driven in a first (rotational) direction on a horizontal plane. A plurality of slide shuttle/transfer mechanisms in the form of pusher blades are provided that permit loading of a slide element into the outer ring of the assembly and also permits movement in a radial direction of slide elements between the inner and outer rotors to effect enhanced loading and unloading of the incubator as well as testing of the elements relative to at least one read station.

None of the disclosed prior art discloses or suggests a technique as described above that permits slide elements to be loaded and tested synchronously between load stations disposed on a common horizontal plane using drive mechanisms that act in different substantially orthogonal directions and particularly to permit slide elements to be driven between load stations or between arrays as described herein.

Applicants' have canceled Claims 1 and 54 and rewritten these claims in an effort to clarify the above-noted features. None of the prior art recites, suggests or otherwise infers an incubator that includes a array support/drive combination that permits at least one array to be moved in a first horizontal direction while also permitting slide elements to be moved in a second orthogonal horizontal direction relative to said arrays so as to move slide elements either between receiving areas or between arrays in the manner of the present invention. It is believed no new matter has been added, support being found in Fig. 2 as well as Figs. 10-12 at a minimum. Because these new Claims are believed to be allowable over the prior art, it is

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believed that Claims 2-22 and 55-59 are also allowable. Each of the foregoing claims have also been amended in an effort to now comport to new Claims 60 and 61. As noted above, however, no new matter has been added. Reconsideration is respectfully requested.

In summary, it is believed the above-captioned patent application is now in an allowable condition and such allowance is earnestly solicited.

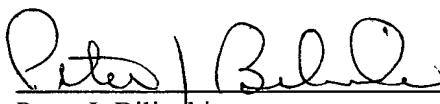
If the Examiner wishes to expedite disposition of the above-captioned patent application, he is invited to contact Applicants' representative at the telephone number below.

The Director is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,

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